Amendments to the Claims

1. (Currently Amended) A valve plate structure comprising:

[[an]] open/shut means for inhaling and discharging fluid through piston movement; and

a valve plate including a suction port coupled with the ~~opening/shutting~~ open/shut means for inhaling fluid through piston movement, a discharge port for discharging fluid through piston movement and a groove section having a plurality of ~~cavities~~ continuous grooves provided to each surround at least a ~~majority of~~ the outside of the suction port or the discharge port.

2. (Currently Amended) The valve plate structure according to claim 1, wherein the open/shut means includes:

a suction valve having a suction plate at a position corresponding to the suction port of the valve plate to intake fluid through piston movement;

a discharge valve having a discharge plate at a position corresponding to the ~~discharging~~ discharge port of the valve plate to discharge fluid; and

a head cover having a suction tube formed at a position corresponding to the suction port of the valve plate and a discharging tube formed at a position corresponding to the ~~discharging~~ discharge port of the valve plate.

3. (Original) The valve plate structure according to claim 1, wherein the fluid is a coolant.

4. (Currently Amended) The valve plate structure according to claim 1, wherein each of the plurality of ~~cavities~~ grooves has a width different from one another.

5. (Currently Amended) The valve plate structure according to claim 1, wherein the ~~cavities~~ grooves are ~~in a shape of~~ circles or polygons ~~such as rectangle and octagon~~.

6. (Currently Amended) The valve plate structure according to claim 1, wherein the width of the ~~cavities~~ grooves increases [[as]] extending away from the center of the suction port or the ~~discharging~~ discharge port of the valve plate.

7. (Currently Amended) The valve plate structure according to claim 1, wherein the ~~cavities~~ grooves are fixed in depth.

8. (Currently Amended) The valve plate structure according to claim 1, wherein each of the ~~cavities surrounding the suction port or the discharging port of the valve plate~~ grooves has a different shape from one another.

9. (Currently Amended) The valve plate structure according to claim 1, wherein the ~~cavities~~ grooves are U-shaped to slowly decrease in width [[as]] extending downward.

10. (Currently Amended) The valve plate structure according to claim 1, wherein the ~~cavities~~ grooves are U-shaped to slowly decrease in width [[as]] extending downward.

11. (Currently Amended) The valve plate structure according to claim 1, wherein opening or closing functions of the open/shut means [[is]] are operated via a pressure difference.

12. (Currently Amended) A valve plate structure comprising:

[[an]] open/shut means for inhaling or discharging fluid through piston movement; and

a valve plate including a suction port coupled to the open/shut means for ~~inducing~~ inhaling fluid through piston movement, a discharge port for discharging fluid through piston movement, and a groove spirally provided to surround the outside of the suction port or the discharge port.

103 13. (Currently Amended) The valve plate structure according to claim 12, wherein the groove contacts with the suction port or the discharge port at one end thereof and has a spiral shape that increase in width [[as]] extending outward.

103 14. (Currently Amended) A valve plate structure comprising:

a suction valve to intake a low pressure [[of]] coolant through a linear ~~back-and-forth~~ reciprocating movement of a piston, and opening and shutting ~~operation~~ in response to the ~~back-and-forth~~ reciprocating movement;

a valve plate coupled with the suction valve, and including a suction port for inhaling the low pressure ~~of~~ coolant through the piston movement, a ~~discharging~~ discharge port for discharging a high pressure ~~of~~ coolant through piston movement, and a groove section having a plurality of ~~cavities~~ continuous ~~grooves~~ provided to ~~each~~ surround at least a majority of the outside of the suction port or the discharge port;

a discharging valve coupled with the valve plate for discharging the high pressure coolant through the reciprocating movement of the piston, and ~~the~~ opening and the shutting ~~operation~~ in response to the ~~back-and-forth~~ reciprocating movement; and

a head cover coupled with the ~~discharge~~ discharging valve, and including a suction tube formed at a position corresponding to the suction port of the valve

plate and a discharging tube formed at a position corresponding to the discharge port of the valve plate.

15. (Currently Amended) The valve plate structure according to claim ~~12~~ 14, wherein the suction valve, the valve plate, the discharging valve and the head cover are coupled via a bolt.

16. (New) The valve plate structure according to claim 1, wherein the plurality of continuous grooves completely surround the outside of the suction port or the discharge port.

17. (New) The valve plate structure according to claim 14, wherein the plurality of continuous grooves completely surround the outside of the suction port or the discharge port.